Entry denied El stistog

Date:

February 10, 2004

Pages:

1 (including cover sheet)

To:

Ehud Gartenberg

United States Patent and Trademark Office

Ph.

703-308-2634

Fax

703-746-4060

From:

Bret Cahill

409-833-2741 P. O. Box 6322

Beaumont, TX 77725

RECEIVED

FEB 1 9 2004

TECHNOLOGY CENTER R3700

Re:

External Rotor Gas Turbine

NPA Application Number 10/090260

PPA No. 60/273426

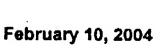
While the claims are very broadly written in the Chamis engine, it is clear from the abstract and drawings that the purely axial flow Chamis engine never anticipated the design or features of the NPA 10/090260 or PPA 60/273426 (radial flow turbine/centrifugal or axial flow compressor). The Chamis engine was motivated by higher inlet temperatures made possible with ceramic turbine blades thrown into compression by centrifugal force. While ceramic inserts may be used in the radial engine's nozzles, the chief motivation for the external rotor radial engine design wasn't to throw ceramic into compression, but to eliminate blades. Without blades, blade tips or the associated problems with blade tip clearances, higher inlet temperatures are possible along with significant external cooling. The bearings in the radial flow engine are internal and inverted; The Chamis engine, truly an inside out design, is mounted on external bearings. The Chamis engine is described as a "drum" but the working fluid actually flows through an annulus. The radial flow engine, in contrast has no similar annulus.

The engines are radically different designs and no engineer can look at the drawings or abstract and come to a different conclusion. If some of my claims need to be rewritten, please contact me.

Bret Cahill

Date:

Pages:



6 (including cover sheet)

To: Ehud Gartenberg

United States Patent and Trademark Office

Ph. 703-308-2634 Fax 703-746-4060

From: Bret Cahill 409-833-2741 P. O. Box 6322

Beaumont, TX 77725

Re: External Rotor Gas Turbine

But Celill

NPA Application Number 10/090260

PPA No. 60/273426

The following is the PPA filed March 5, 2001

RECEIVED

FEB 1 9 2004

TECHNOLOGY CENTER R3700

Bret Cahill